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THOMAS A. GALLAGHER
60 LONG RIDGE ROAD
SUITE 407
STAMFORD, CT 06902

EXAMINER

BROWN JR, NATHAN H

ART UNIT	PAPER NUMBER
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2121

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/660,305	Applicant(s) WARREN ET AL.	
	Examiner Nathan H. Brown, Jr.	Art Unit 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 33-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 and 33-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Examiner's Detailed Office Action

1. This Office Action is responsive to the communication for application 10/660,305, filed October 5, 2007.
2. Claims 1-31 and 33-38 are pending. Claims 1, 18, 29, 31, 33 are currently amended. Claim 32 is cancelled. Claims 2-17, 19-28, 30, 34-38 are original.
3. After the previous office action, claims 1-38 stood rejected.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-17, 37 and 38 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter: abstraction, no practical application, and/or violation of the doctrine of preemption. Amended independent claim 1 recites a: "collection of software tools embodied on a computer readable medium for acquiring data from diverse sources and/or structuring the data and/or determining similarity of content". Examiner considers data per se to

be a mathematical abstraction of facts, concepts, and instructions. Examiner also considers the similarity of data content to be a mathematical abstraction based on some metric space. Since claim 1 recites no particular type of data for determining similarity of data content, the final result of using the tools recited is pure abstraction having no specific and substantial meaning. Further, since every substantial thing can be represented as facts, concepts, or instructions, claim 1 violates the doctrine of preemption by applying the mathematical principles of determining similarity of content to data per se. Claims 2-17, 37 and 38 provide detail limitations on the software tools recited in claim 1 and thus fail to cure the deficiencies of claim 1. Therefore, claims 1-17, 37 and 38 are considered to be non-statutory under 35 U.S.C. 101.

6. Claims 18-28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter: no practical application and/or violation of the doctrine of preemption. Amended independent claim 18 recites a: "web agent creator embodied on a computer readable medium for creating a web agent to acquire data from the world wide web". Examiner considers the "web agent creator embodied on a computer readable medium" to have no practical application since the "web agent" it creates, as a result of executing, is a functional program which essentially has no practical application and is violation of the doctrine of preemption in the same way as the software tools recited in claim 1 are. Claim 18 is therefore considered to be non-statutory under 35 U.S.C. 101. Claims 19-28 merely provide detailed functional limitation to the web agent creator recited in claim 18, thus failing to cure the deficiencies of claim 18. Therefore, claims 18-28 are considered to be non-statutory under 35 U.S.C. 101.

7. Claims 29 and 30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter: abstraction and/or software per se. Amended independent claim 29 recites an the means for an “ontology directed classifier embodied on a computer readable medium”. Examiner considers Applicant's invention to be directed to the software comprising the functional means to implement an “ontology directed classifier” rather than the computer readable medium. An “ontology directed classifier embodied on a computer readable medium” necessarily has no hardware components, therefore Examiner considers the “ontology directed classifier” to be software per se. Further, Examiner considers “a tree of classes and subclasses” to be a mathematical abstraction of data relationships providing no providing no specific and substantial application, given that the tree is based on data per se. Claim 30 merely provides detailed limitation on the functioning of the “ontology directed classifier” and thus fails to cure the deficiencies of claim 29. Therefore, claims 29 and 30 are considered non-statutory under 35 U.S.C. 101.

8. Claim 31 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter: abstraction and/or software per se. Amended independent claim 31 recites an the means for an “ontology directed extractor embodied on a computer readable medium”. Examiner considers Applicant's invention to be directed to the software comprising the functional means implementing an “ontology directed extractor” rather than the computer readable medium. An “ontology directed extractor embodied on a computer readable medium” necessarily has no hardware components, therefore Examiner considers the “ontology directed

extractor” to be software per se. Further, Examiner considers "a set of structure property values" to be a mathematical abstraction of data relationships providing no specific and substantial application, given that the set is based on data per se. Therefore, claim 31 is considered to be non-statutory under 35 U.S.C. 101.

9. Claims 33-36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter: abstraction and/or software per se. Amended independent claim 33 recites an the means for an “ontology directed matcher embodied on a computer readable medium”. Examiner considers Applicant's invention to be directed to the software comprising the functional means to implement an “ontology directed matcher” rather than the computer readable medium. An “ontology directed matcher embodied on a computer readable medium” necessarily has no hardware components, therefore Examiner considers the “ontology directed matcher” to be software per se. Further, Examiner considers a score of "the degree of equivalence of items based on...definitions" to be a mathematical abstraction of data relationships providing no providing no specific and substantial application, given that the score is based on data per se. Claims 34-36 merely provide detailed limitation on the mathematics and functioning of the “ontology directed matcher” and thus fails to cure the deficiencies of claim 33. Therefore, claims 33-36 are considered non-statutory under 35 U.S.C. 101.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

11. Claims 31 is rejected under 35 U.S.C. 102(a) as being anticipated by *Baclawski* (USPN: 6,424,973).

Regarding claim 31. *Baclawski* teaches an ontology directed extractor (*see* Abstract, “The home node extracts features from the query, according to its ontology.”) embodied on a computer readable medium (*see* Fig. 1, Item 114, *Examiner interprets the local disk 114 of HOME NODE 107 to be a computer readable medium.*) for use with an ontology management system (*see* Abstract, *Examiner interprets a “...search engine for retrieval of objects processed by a variety of interrelated ontologies. Each object conforms to a specific ontology.” to be an ontology management system.*), said ontology directed extractor, comprising:

means for receiving an unstructured text description about an item as input (*see* Abstract, “A query from a user is transmitted to one of the front end computers which forwards the query to one of the computer nodes, termed the home node,” *Examiner interprets the query to be unstructured text since its features are extracted “according to its ontology”.*), and

means for producing a set of structured property values about the item as output, wherein said structured property values are structured by ontology relationships (*see* Abstract, “Each hashed feature and the list of target ontologies is transmitted”, *Examiner interprets “Each*

hashed feature and the list of target ontologies" to comprise a set of structured property values structured by ontology relationships.);

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Paik et al. (Paik)* (USPN: 6,076,088) in view of *Dahlgren et al. (Dahlgren)* (USPN: 5,794,050).

Regarding claim 1. *Paik* teaches a collection of software tools (*see* §2.0 Document Processing, Examiner interprets "Numeric Concept Interpreter" and "Concept Identifier" to be software tools.) embodied on a computer readable medium (*see* Fig. 1, Examiner interprets Item 35' to be

a computer readable medium.) for acquiring data from diverse sources (*see* Abstract) and/or structuring the data (*see* col. 5, lines 41-44) and/or determining similarity of content (*see* col. 22, lines 40-46). *Paik* doesn't teach the said collection of software tools comprising: two or more tools selected from the group consisting of a web agent creator, a web agent created by the web agent creator, a web agent manager, an ontology-directed classifier, an ontology-directed extractor, and an ontology-directed matcher. However, *Dahlgren* does teach the said collection of software tools comprising: an ontology-directed classifier (*see* col. 5, line 38 to col. 6, line 12, *Examiner interprets the "first process" to comprise an ontology-directed classifier in the NLU.*), and an ontology-directed extractor (*see* col. 5, line 38 to col. 6, line 12, *Examiner interprets the "second process" to comprise an ontology-directed extractor since "The NLU module is used to generate a cognitive model of a text retrieval request (i.e., query)."*). It would have been obvious at the time the invention was made to persons having ordinary skill in the art to combine *Paik* with *Dahlgren* to interpret natural language input using common sense reasoning in order to avoid combinatorial explosion.

14. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Paik* in view of *Dahlgren* and further in view of *Fonseca et al. (Fonseca)*, "MAGUI - A Multi-Agent Graphical User Interface", 1997 and still further in view of *Wenyin*, "Example-Driven Graphics Recognition", 2002.

Regarding claim 2. *Paik* and *Dahlgren* teach the collection according to claim 1. *Paik* and *Dahlgren* do not teach one or more of the tools are example driven through a graphical user interface. *Fonseca* does teach one or more of the tools are a graphical user interface (*see* §IV. The Graphical User Interface). *Wenyin* teaches one or more of the tools an example driven interface (*see* Abstract). It would have been obvious at the time the invention was made to persons having ordinary skill in the art to combine *Paik* and *Dahlgren* with *Fonseca* to handle interacting with a multitude of different autonomous agents often characterized by a great dynamics and *Paik*, *Dahlgren* and *Fonseca* with *Wenyin* to allow the user to specify one or more examples of one type of object in a problem, an the system then learn constraint rules among the components in this type of object and recognize similar objects or similar problems by matching the constraint rules.

Response to Arguments

15. Applicant's arguments filed October 5, 2007 have been fully considered but they are not persuasive.

Rejection of Claims 1-38 Under 35 U.S.C. §101

Applicants argue:

Claims 1-38 stands rejected under 35 U.S.C. §101 as being drawn to non- statutory subject matter. The undersigned spoke by telephone with the Examiner who agreed that this rejection could be overcome by adding the phrase "embodied on a computer readable medium" to the preamble of each independent claim. Having amended the independent

claims in this way, it is respectfully submitted that the § 101 rejection has been overcome.

Examiner responds:

Examiner has provided new grounds of rejection under 35 U.S.C. §101 of all amended claims.

Rejection of Claim 31 Under 35 U.S.C. §102(a)

Applicants argue:

Claim 31 stands rejected under 35 U.S.C. § 102(a) as anticipated by Baclawski. Claim 31 has been amended to include the limitations of claim 32. It is therefore respectfully submitted that claim 31 is now allowable.

Examiner responds:

Examiner considers the addition of the limitations of claim 32 to claim 31 to not overcome the rejection under 35 U.S.C. § 102(a) as anticipated by Baclawski as the “hashed feature and the list of target ontologies” is interpreted to comprise a set of structured property values structured by ontology relationships.

Rejection of Claim 31 Under 35 U.S.C. §103(a)

Applicants argue:

Claim 1 stands rejected under 35 U.S.C. § 103(a) as obvious over Paik in view of Dahlgren. Claim 1 has been amended. It is respectfully submitted that amended claim 1 is allowable over the art of record.

Examiner responds:

Amended claim 1 remains rejected under 35 U.S.C. § 103(a) as obvious over Paik in view of Dahlgren since Dahlgren discloses both ontology-directed classification and extraction functions.

Applicants argue:

Claim 2 stands rejected under 35 U.S.C. § 103(a) as obvious over Paik in view of Fonseca, and further in view of Wenyin. Claim 2 depends from claim 1. It is believed that the amendment to claim 1 moots this rejection of claim 2.

Examiner responds:

Claim 2 stands rejected under 35 U.S.C. § 103(a) as obvious over Paik in view of Dahlgren and further in view of Fonseca and still further in view of Wenyin. Claim 2 depends from claim 1. The amendment to claim 1 does not moots the rejection of claim 2 as claim 1 remains rejected under 35 U.S.C. § 103(a).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan H. Brown, Jr. whose telephone number is 571-272- 8632. The examiner can normally be reached on M-F 0830-1700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Vincent can be reached on 571-272-3080. The fax phone number for the organization where this application or proceeding is

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assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


David Vincent
Supervisory Patent Examiner
Tech Center 2100

Nathan H. Brown, Jr.
December 14, 2007